

REMARKS

This Office Action has been reviewed in light of the final Office Action mailed on December 30, 2008. Claims 1-17 are now pending in this application, with claims 1, 9, and 17 being independent. Claims 1 and 9 have been amended to define still more clearly what Applicant regards as his invention; no change in scope of these claims is either intended or believed to be effected by the changes. Claim 17 has been added.

Request for Interview

Applicant respectfully submits that the Examiner has not fully addressed Applicant's arguments that were presented in the previous Amendment filed on October 1, 2008. Accordingly, while this Amendment is believed clearly to place this application in condition for allowance, should the Examiner still believe that issues remain outstanding, he is respectfully requested to contact Applicant's undersigned attorney to schedule an interview for the purpose of resolving such issues and advancing the case to issue.

The Rejections under 35 U.S.C. § 112

Claims 1-16 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Claims 1-16 were also rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

The rejections center on the Examiner's conclusion, for example with respect to independent claim 1, that the recitation "passing... any remaining re-circulate extinguishing medium to the pump means" (lines 7-9) appears to be a double inclusion of "re-circulating at least some of the extinguishing medium which is not passed to the nozzle back to a suction side of the pump means" (lines 5-6). Applicants have canceled the recitation of lines 7-9 from claim 1. Similar changes have been made to independent claim 9.

For at least the foregoing reasons, withdrawal of the rejections under 35 U.S.C. § 112, first and second paragraphs, are respectfully requested.

The Prior Art Rejections

Claims 1-7, 9, 11-13, and 15 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 1,087,136 to Chatman; and claims 1-6, 9, 11-13, and 15, as being anticipated by U.S. Patent No. 5,398,765 to Worthington. Claims 1-16 were rejected under 35 U.S.C. § 103(a) as being obvious from "Applicant's Admission of Prior Art" (AAPA) in view of U.S. Patent No. 4,941,505 to Kirkelund; claims 8, 10, 14, and 16, as being obvious from Chatman; and claims 7, 8, 10, 14, and 16, as being obvious from Worthington.

Applicant submits that independent claims 1, 9, and 17, together with the claims dependent therefrom, are patentably distinct from the cited references for at least the following reasons.

The present invention is directed to a method for use in conjunction with a fire extinguishing spraying apparatus, and also to a fire extinguishing spraying apparatus. As explained in the *Background* section of the present application, in the prior art, fire extinguishing systems based on water mist are known in which typically at least one high-pressure constant-volume pump, especially a piston pump, is used. When such fire extinguishing systems are activated, typically only some of the spray nozzles are triggered. However, the pump unit pumps a constant volume of extinguishing medium into at least one pipeline leading to the nozzle heads. The extra amount of extinguishing medium has typically been re-circulated. The systems typically use an intermediate tank, a so-called **break tank** of a fairly large capacity between the source of extinguishing medium, such as a water supply pipe, and the pump, and the re-circulated extinguishing medium is returned into the break tank. Especially in the case of high pressure pumps, the extinguishing medium

becomes heated during the pumping process, so the use of a break tank prevents excessive heating of the extinguishing medium, overheating being detrimental to the pumps and seals. The returned extinguishing medium stays in the break tank long enough to be cooled down before being circulated by the pump either further to the nozzles or again via re-circulation into the break tank.

Claim 9 is directed to a fire extinguishing spraying apparatus comprising a source of an extinguishing medium, pump means, and means for conducting at least some of the extinguishing medium to at least one nozzle. The improvements comprise (1) means for re-circulating at least some of the extinguishing medium from a pressure side of the pump means to a suction side of the pump means, and (2) means for passing at least some of the extinguishing medium being re-circulated into a discharge pipe.

The AAPA and Kirkelund

Kirkelund, as understood by Applicant, relates to an oil supply system for a burner nozzle including means for preventing the nozzle from dripping.

First, in the Amendment filed on October 1, 2008, Applicant argued that Kirkelund is not a fire extinguishing spray apparatus at all, does not extinguish fires, and cannot extinguish fires. For example, Applicant argued, *inter alia*:

Kirkelund, as noted, is a system that supplies oil to a burner nozzle, and, particularly, aims to prevent oil from dripping from the burner nozzle. A burner nozzle that is supplied with oil is *exactly the opposite* of a fire extinguishing spray apparatus. (Emphasis in the original.)

The Examiner now applies Kirkelund to the AAPA. Applicants submit that this combination is not permissible, as explained below -- but even if it were permissible it would not teach or suggest the features of claim 9.

The combination is not permissible because, for one thing, Kirkelund is not analogous prior art.

**TO RELY ON A REFERENCE UNDER 35 U.S.C. 103,
IT MUST BE ANALOGOUS PRIOR ART**
MPEP 2141.01(a)(I) (emphasis original)

Claim 9 is directed to a fire extinguishing *spraying* apparatus in which *extinguishing* medium is conducted to a nozzle and can extinguish a fire when sprayed. The burner nozzle of Kirkelund, which contains *oil*, cannot extinguish a fire by *spraying* it. The oil supplied to the burner nozzle, as in Kirkelund, cannot be an extinguishing medium. As noted above, an oil supply system for a burner nozzle is *exactly the opposite* of the fire extinguishing spraying apparatus of claim 9. Turning *off* the burner nozzle of Kirkelund would not help extinguish a fire that exists elsewhere, and turning *on* the burner nozzle of Kirkelund would only exacerbate any fire by spewing oil from its nozzle. The structure and function of Kirkelund are different from the fire extinguishing spraying apparatus of claim 9.

Moreover, the Examiner's underpinning to support the legal conclusion of obviousness is not rational as required by *KSR*:

... [R]ejections on obviousness cannot be sustained by mere conclusory statements; instead there must be some articulated reasoning with some **rational** underpinning to support the legal conclusion of obviousness. *MPEP 2141.III*, quoting *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 82 USPQ2d 1385, 1396 (2007). (Emphasis added.)

The Examiner's states at page 8 of the Office Action:

It would have been obvious to a person having ordinary skill in the art at the time of the invention to have provided the recirculation and discharge pipe of Kirkelund to the Prior Art to control excessive pressure (Kirkelund, column 3, lines 5-12). (Emphasis added.)

This is not rational because element 16 of Kirkelund is an oil supply and is not a discharge pipe. Applicant explained this previously, and now the Examiner applies Kirkelund to the AAPA but the Examiner still does not address Applicant's argument. The oil supply system of Fig. 1 of Kirkelund takes oil from oil supply 16 and supplies it to the pump 12. Thus, the oil supply 16 *does not discharge oil, but, instead, supplies it to the pump 12*. The Examiner even admits this, when he writes "leading to supply 16" (page 7 of the Office Action; emphasis added).

Element 16 of Kirkelund is merely similar to a break tank, which is what the present invention intends to avoid. Specifically, the oil supply 16 of Kirkelund is also a break tank where the returned oil stays long enough in order to be cooled down before being circulated by the pump.

Therefore, even assuming *arguendo* that the combination of the AAPA and Kirkelund were permissible, such combination would not teach or suggest the features of claim 9.

For at least the foregoing reasons, claim 9 is seen to be clearly allowable over the AAPA and Kirkelund.

Independent claim 1 recites features which are similar in many relevant respects to those discussed above in connection with claim 9. Accordingly, Claim 1 is believed to be patentable over the AAPA and Kirkelund for at least the same reasons as discussed above.

Worthington

Worthington, as understood by Applicant, relates to a mobile modular foam fire suppression apparatus. Fig. 1 is an isometric view of a firefighting scene showing a method of fighting a fire. Fig. 3 is a perspective view of a possible physical layout of the major components of the apparatus schematically shown in Fig. 2.

In the *Response to Arguments* section of the Office Action (page 11), the Examiner states the following:

Applicant argues that Worthington does not teach passing at least some of the extinguishing medium being re-circulated into a discharge pipe. Worthington discloses re-circulating extinguishing medium via regulator 15 and by-pass valve 74. Figure 3 shows a pipe connection upstream of by-pass valve 74 (downstream of regulator 15) to pipe 102 which in turn is connected to discharge pipe 28. (Emphasis added.)

The Examiner continues to assert that element 28 of Worthington is a discharge pipe. This is simply not the case, as Applicant explained in the previous Amendment. The Examiner has not addressed Applicant's argument.

Element 28 of Worthington is a return hose and is referred to as such in the patent. Specifically, excess foam concentrate is returned through the return hose 28 to an intake on the foam concentrate supply vessel 16 (see column 3, lines 26-30). The foam concentrate supply vessel 16 (see Fig. 1) is in fact a break tank; the excess of foam concentrate is returned to vessel 16 and then back to the suction side of the pump via a foam concentrate intake line 22.

Nothing in Worthington would teach or suggest passing at least some of the extinguishing medium being re-circulated into a discharge pipe, as recited in claim 9.

For at least the foregoing reasons, claim 9 is seen to be clearly allowable over Worthington.

Independent claim 1 recites features which are similar in many relevant respects to those discussed above in connection with claim 9. Accordingly, Claim 1 is believed to be patentable over Worthington for at least the same reasons as discussed above.

Chatman

Chatman, as understood by Applicant, relates to a combined heating and sprinkler system. Here, the Examiner asserts that element 26 is a discharge pipe. However, element 26 is not a discharge pipe. Element 26 is a connection which connects supply pipe 6 to supply tank 24. Water flows from the supply tank 24 to supply pipe 6 and then out to sprinkler pipes 8 (see, e.g., page 2, lines 41-56). Element 26 is not a discharge pipe.

Nothing in Chatman would teach or suggest at least “means for passing at least some of the extinguishing medium being re-circulated into a discharge pipe,” as recited in claim 9.

For at least the foregoing reasons, claim 9 is seen to be clearly allowable over Chatman.

Independent claim 1 recites features which are similar in many relevant respects to those discussed above in connection with claim 9. Accordingly, Claim 1 is believed to be patentable over Chatman for at least the same reasons as discussed above.

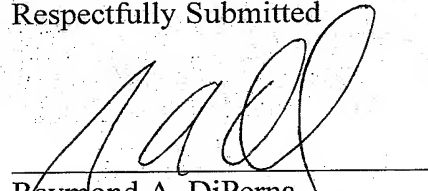
New independent claim 17 is believed to be patentable for at least the same reasons as discussed above in connection with independent claims 1 and 9. Claim 17 is also believed to be patentable for reciting the feature “wherein the extinguishing medium being re-circulated back to the suction side of the pump means is mixed with extinguishing medium obtained from the source to prevent excessive heating of the extinguishing medium being re-circulated.” Support for this feature is found in the present specification, at least at page 4, lines 22-26.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

Conclusion

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Respectfully Submitted

A handwritten signature in black ink, appearing to read 'RAD', is written over a horizontal line.

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